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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Takanori YAMASHITA et al.

Serial No.: New Application

Filed: August 15, 2001

For: POLYMER BATTERY MODULE PACKAGING SHEET AND
A METHOD OF MANUFACTURING THE SAME

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination of the above-identified application,
please enter the following specification changes as noted below:

IN THE CLAIMS:

Please amend claims 46-49 and 57-60 as follows:

46. (Amended) The polymer battery module packaging sheet
manufacturing method according to claim 44, wherein

the adhesive resin layer is formed of a medium-density polyethylene resin.

47. (Amended) The polymer battery module packaging sheet manufacturing method according to claim 44, wherein

the adhesive resin layer is formed of a linear low-density polyethylene resin.

48. (Amended) The polymer battery module packaging sheet manufacturing method according to claim 43 further comprising:

the step of heating a laminated sheet including the aluminum layer, the base layer, the adhesive resin layer and the innermost layer at a temperature not lower than a softening point of a material forming the adhesive resin layer.

49. (Amended) The polymer battery module packaging sheet manufacturing method according to claim 43, wherein

the surface of the aluminum layer facing the molten resin film is heated at a temperature not lower than a softening point of a resin forming the molten resin film.

57. (Amended) The polymer battery module packaging sheet manufacturing method according to claim 54, wherein

the adhesive resin layer is formed of a medium-density polyethylene resin.

58. (Amended) The polymer battery module packaging sheet manufacturing method according to claim 54, wherein

the adhesive resin layer is formed of a linear low-density polyethylene resin.

59. (Amended) The polymer battery module packaging sheet manufacturing method according to claim 54 further comprising:

the step of heating a laminated sheet including the base layer, the aluminum layer, the adhesive resin layer and the innermost layer at a temperature not lower than a softening temperature of the adhesive resin.

manufacturing method according to claim 54, wherein

the surface of the aluminum layer facing the molten resin film is heated at a temperature not lower than a softening point of the molten resin film when laminating the molten resin film to the aluminum layer.

REMARKS

Claims 1-76, as amended, remain herein.

This Preliminary Amendment is submitted to eliminate multiply dependent claims from the above-identified application.

Examination of this application on its merits is respectfully requested.

Respectfully submitted,

PARKHURST & WENDEL, L.L.P.

August 15, 2001
Date



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Attachment:

Mark Up of Amended Claims

RWP/ame

Attorney Docket No. DAIN:646

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while a surface of a molten resin film forming the adhesive resin layer facing the aluminum layer is processed by ozone treatment.

45. A polymer battery module packaging sheet manufacturing method, comprising the steps of:

processing one of surfaces of an aluminum layer by chemical conversion treatment;

dry-laminating the aluminum layer to a base layer with the other surface thereof not processed by the chemical conversion treatment bonded to the base layer;

forming an adhesive resin layer by extruding an adhesive resin in a molten resin film on the surface of the aluminum layer processed by the chemical conversion treatment while a surface of the molten resin film facing the aluminum layer is processed by ozone treatment, and bonding a film for forming an innermost resin layer to the aluminum layer by the adhesive resin layer.

46. The polymer battery module packaging sheet manufacturing method according to claim 44 ~~or 45~~, wherein

the adhesive resin layer is formed of a medium-density polyethylene resin.

47. The polymer battery module packaging sheet manufacturing method according to claim 44 ~~or 45~~, wherein

the adhesive resin layer is formed of a linear low-density polyethylene resin.

48. The polymer battery module packaging sheet manufacturing method according to ~~any one of claims 43 to 45~~ claim 43 further comprising:

the step of heating a laminated sheet including the aluminum layer, the base layer, the adhesive resin layer and the innermost layer at a temperature not lower than a softening point of a material forming the adhesive resin layer.

49. The polymer battery module packaging sheet manufacturing method according to ~~any one of claims 43 to 45~~ claim 43, wherein

the surface of the aluminum layer facing the molten resin film is heated at a temperature not lower than a softening point of a resin forming the molten resin film.

50. A polymer battery module packaging sheet manufacturing

the aluminum layer is processed by ozone treatment.

56. A polymer battery module packaging sheet manufacturing method comprising the steps of:

processing both surfaces of an aluminum layer by chemical conversion treatment;

dry-laminating a base layer to one of the surfaces of the aluminum layer; and

extruding an adhesive resin on the other surface of the aluminum layer in a molten adhesive resin film, sandwich-laminating a film for forming an innermost layer to the other surface of the aluminum layer by the molten adhesive resin film while a surface of the molten adhesive resin film facing the aluminum layer is processed by ozone treatment.

57. The polymer battery module packaging sheet manufacturing method according to ~~any one of claims 54 to 56~~ claim 54, wherein

the adhesive resin layer is formed of a medium-density polyethylene resin.

58. The polymer battery module packaging sheet manufacturing method according to ~~any one of claims 54 to 56~~ claim 54, wherein

the adhesive resin layer is formed of a linear low-density polyethylene resin.

59. The polymer battery module packaging sheet manufacturing method according to ~~any one of claims 54 to 56~~ claim 54 further comprising:

the step of heating a laminated sheet including the base layer, the aluminum layer, the adhesive resin layer and the innermost layer at a temperature not lower than a softening temperature of the adhesive resin.

60. The polymer battery module packaging sheet manufacturing method according to ~~any one of claims 54 to 56~~ claim 54, wherein

the surface of the aluminum layer facing the molten resin film is heated at a temperature not lower than a softening point of the molten resin film when laminating the molten resin film to the aluminum layer.